

Environmental Consequences

IMPACTS OF ALTERNATIVE 1: CONTINUATION OF EXISTING CONDITIONS

Impacts on Cultural Resources

Analysis. Responsibility for preserving Moccasin Bend's cultural resources would remain with the current landowners and lessees. There would be no overall organized effort dedicated to help protect or restore cultural resources on either private or public land. Preservation efforts would continue to be fragmented and uncoordinated due to limited technical assistance and absence of funding. A lack of standard preservation policies would likely result in inconsistent resource protection and possible loss of resource integrity.

American Indian and Civil War sites would continue to benefit from regular patrols by the Native American Reserve Force by deterring looting and vandalism. Continued streambank erosion on the southwestern and western sides of the site could result in further loss of archeological resources. The possibility for future development on Moccasin Bend would increase the potential for further loss of resources.

Conclusion. Overall, alternative 1 would have long-term adverse impacts on cultural resources as a result of continued trends and conditions.

Impacts on Natural Resources

Analysis. Under alternative 1 Moccasin Bend would remain in its present condition and current trends of natural resource management would continue. Erosion would still occur along the western and southwestern streambanks, which would result in loss of soils and an increase in sedimentation of the river. Water quality and aquatic life would continue to be affected by the sedimentation that occurs primarily at bends in the river. No project-related impacts on floodplains, wetlands, and threatened, endangered, and special concern species would be anticipated.

Conclusion. Continuation of current trends would have minor adverse impacts on natural resources as a result of streambank erosion.

Impacts on Visual Resources

Analysis. Alternative 1 would not change views in and around Moccasin Bend. The potential exists for present or future owners to make changes that would alter the appearance of the site including additional intrusive development.

Conclusion. Short-term and long-term impacts on visual resources would be anticipated to continue to be major and adverse.

Impacts on Socioeconomic Environment

Analysis. Since no new development is called for under this alternative, no short-term gains in the economy would be expected. In addition, long-term contributions to the economy from visitor expenditures would not be expected to increase. Land use would remain the same on Moccasin Bend.

Conclusion. Implementing this alternative would have negligible effects on the socioeconomic environment in the Chattanooga area. Current social, economic, and land use conditions and trends would be anticipated to continue into the future.

Impacts on Visitor Experience

Analysis. Access, parking, and circulation systems would continue to serve the present-day users of the Moccasin Bend site. Benefits to visitors wishing to learn about Civil War events and archeology on the site would continue to be limited to existing signs and infrequent guided tours of Stringers Ridge. Present-day recreational uses would be likely to continue.

Conclusion. Continuing current conditions would have negligible effects on access, parking, circulation, and recreational uses. Visitors would not have the opportunity to benefit from enhanced interpretation of cultural sites.

IMPACTS OF ALTERNATIVE 2: MOCCASIN BEND NATIONAL HISTORICAL PARK

Impacts on Cultural Resources

Analysis. NPS acquisition would benefit cultural resources by establishing a unified, systematic approach to cultural resource management. This would include the preparation of appropriate plans to manage the site according to federal laws, rules, regulations, guidelines, and NPS management policies.

Working and consulting with affiliated American Indian groups would increase archeological, ethnographic, and historical knowledge of the site and would promote more effective management, protection, and preservation of important cultural resources. Indigenous knowledge of Moccasin Bend would be applied in managing the site's resources.

Archeological surveys would be conducted if needed before any ground-disturbing activities would begin. These activities would include removal of current incompatible use facilities, bank stabilization, placement of utilities underground, and construction of new visitor facilities. New facilities would be designed to avoid archeological sites. Mitigation procedures, including further surveying, data recovery, and monitoring if necessary, would be developed in consultation with the Tennessee state historic preservation officer and the Advisory Council on Historic Preservation. With the mitigation identified, effects on archeological resources would be expected to be negligible. Where and when appropriate, the National Park Service would continue to consult with the Tennessee state historic preservation officer and the Advisory Council on Historic Preservation.

Increased visitation would increase the potential for inappropriate activities at sensitive cultural resource sites. Continuation of regular patrols by the Native American Reserve Force as well as NPS rangers would help deter these activities.

In addition, resource protection would be improved by enhanced interpretation, which would actively educate visitors and local residents about the value of Moccasin Bend's resources. Visitors would be informed about the need for

cultural conservation and the preservation of cultural landscapes and archeological sites.

Removal of state hospital facilities, radio towers, and other incompatible uses would benefit cultural resources by enabling cultural landscape restoration. Riverbank stabilization would reduce soil erosion and help prevent the further loss of archeological resources.

Conclusion. Alternative 2 would have a variety of beneficial effects on cultural resources. Long-term benefits would be achieved through a systematic approach to management, consultation with affiliated American Indian groups, and enhanced education of visitors and residents.

Impacts on Natural Resources

Analysis. Construction disturbance associated with removal of incompatible uses and development of a maintenance facility and visitor facilities, such as an interpretive trail system, the roadway, kiosks, wayside exhibits, restrooms, and shaded structures, would affect vegetation, soils, and wildlife habitat.

Wildlife would be temporarily disturbed but would be expected to reoccupy habitat after construction. Construction activities and restoration of the cultural landscape would require the selective removal of a currently undetermined amount of vegetation and disturbance of soils.

Riverbank stabilization activities and removal of facilities such as the hospital structures and construction of new facilities has the potential for soil erosion, which would adversely affect water quality of the river and aquatic life. Best management practices for erosion control would be applied, and subsequent revegetation would mitigate the potential for long-term erosion of exposed soils and potential intrusion by exotic species. Riverbank stabilization would reduce the potential for soil erosion in the affected area.

If visitation to Moccasin Bend increased significantly, compaction of soils could occur if visitors did not remain on roadways and walkways. Soil compaction could cause long-term loss of vegetative cover, thereby accelerating erosion and subsequent soil loss.

Much of Moccasin Bend has been disturbed and is maintained as urban landscape. In areas where previous development has not occurred and before any construction activities begin, site-specific surveys for threatened, endangered and special concern species would be conducted to find any new occurrences. If any threatened or endangered species are found, the National Park Service would develop and carry out appropriate measures in consultation with the U.S. Fish and Wildlife Service to ensure that these species are not adversely affected.

New facilities would be designed to avoid floodplains and wetlands wherever possible. Due to the extensive nature of the floodplains, new development such as trails and the roadway proposed in alternative 2 is likely to impact the 100- and 500-year floodplains. These facilities do not involve overnight use, and, therefore, are exempted from Executive Order 11988 regarding floodplain management (see “Compliance with Federal and State Laws, Executive Orders, and Regulations” section).

Because this planning framework is of a conceptual nature, locations and amount of disturbed area cannot be determined at this time. Further environmental analysis and documentation to comply with the National Environmental Policy Act would be needed for individual projects when project details have been defined.

Conclusion. Alternative 2 would have minor adverse impacts on natural resources. Construction activities would result in temporary degradation of water quality and temporary disturbance of wildlife and aquatic life. These effects would be localized and minor. Long-term beneficial effects on the natural environment would result from stabilization of the riverbank, removal of incompatible uses, and revegetation of the affected areas.

Impacts on Visual Resources

Analysis. Implementing alternative 2 would have long-term beneficial impacts on visual resources. Removal of state hospital buildings and infrastructure, radio towers, the law enforcement firearm training range, the golf course, and overhead utility lines would eliminate most intrusive development from Moccasin Bend’s viewshed. Removal of these buildings and structures would

enable these areas to revegetate to a more natural state. Some views within and outside Moccasin Bend might be obscured with taller vegetation in these areas.

Visitor facilities such as shade structures, restrooms, trails, parking lots, kiosks, and wayside exhibits would be placed in unobtrusive locations. Moccasin Bend Road would be obvious in the viewshed.

Conclusion. New development would result in minor long-term adverse impacts on visual resources. Removal of present-day intrusive development from the viewshed would have major long-term beneficial effects on visual resources.

Impacts on Socioeconomic Environment

Analysis. Removing incompatible uses from the Moccasin Bend site would result in substantial changes in land use. Present-day land uses by the hospital, golf course, model airplane club, radio station, and law enforcement firearm training range would be converted to park land uses. These changes would not be expected to affect adjacent land uses outside the park.

The land use changes would displace the above operations and result in the need for relocation to continue functioning if deemed necessary. Removing the privately-held land from the tax roles would result in a permanent small loss of tax revenue for the community. This loss would be negligible relative to the overall tax structure. Removal of the mental health hospital could result in the loss of 400 staff and a payroll of approximately \$14 million per year. This potential loss of jobs and payroll to the community could potentially be offset if mental health services were provided elsewhere in Chattanooga. If appropriate mental health services were not provided, there is a great concern regarding the health and welfare of the patients currently using the services of the mental health hospital at Moccasin Bend. The state of Tennessee could prepare a comprehensive social impact study of the anticipated displacement of workers, patients, and loss of revenue to the region. The state of Tennessee has stated a concern of turning over a state asset to the federal government as well as paying for the removal of the mental health hospital. There may

be the potential to offset these costs by increased revenue from tourist-related activities. Closure of the golf course by the year 2005 would result in the loss of 12 full-time and 12 part-time jobs as well as an annual lease payment to the city of Chattanooga of \$107,000 per year. Current users of the golf course would have to go elsewhere to play. This would be an inconvenience and potentially an economic hardship if comparable green fees cannot be found within the Chattanooga area. Hamilton County and the city of Chattanooga are currently looking for an alternate location for the law enforcement firearm training range if Moccasin Bend were to become a unit of the national park system. Approximately 100 members that use the model airplane park would be displaced. The city and county would lose \$200.00 per year in lease income. Again, if an alternate site could be found, it would offset this potentially negative impact.

The state of Tennessee has stated a concern of turning over a state asset to the federal government as well as paying for the removal of the mental health hospital. There may be the potential to offset these costs by increased revenue from tourist-related activities.

Construction activities would provide a slight beneficial impact on the local economy. Potential benefits would include a short-term increase in employment opportunities for the construction workforce and revenue from supplies purchased in the area. In addition to these short-term direct expenditures, jobs created from enhanced visitor services and management of the new site and the Friends of Moccasin Bend interpretive center/museum would result in long-term indirect benefits as funds were spent within the local economy.

Visitation would be expected to increase at Moccasin Bend; however, it is unclear what the rate of increase in visitors to the Chattanooga area would be. However, visitors' length of stay would likely be increased. Moccasin Bend visitors could generate revenues for services including restaurants and service stations within the immediate area.

Conclusion. Alternative 2 would change land use from its current multiuses to public land uses and result in the displacement of the site's current facilities and operations. Development and

construction activities at Moccasin Bend would result in short-term economic benefits for a few individuals and firms. Long-term economic benefits to the city of Chattanooga would result from tourist expenditures in the area.

Impacts on Visitor Experience

Analysis. Access, circulation, and parking facilities would be designed to enable visitors to enter and move safely through the site. Much of the site would be accessible to visitors with disabilities. Interpretive trails, signs, and wayside exhibits would facilitate the distribution of visitors throughout the park and help avoid crowding in individual areas.

Alternative 2 would enhance the visitor experience with educational programs at the proposed Friends of Moccasin Bend visitor center/museum, as well as interpretive trails and wayside exhibits located onsite. Opportunities would be increased for visitors to gain a comprehensive understanding of Civil War events and archeological sites at Moccasin Bend.

Consultation with American Indian groups would enhance the visitor experience through increased knowledge and by presenting a balanced view of traditional uses of the area. Restoring the cultural landscape would assist visitors to better visualize the historic scenes and better appreciate the significance of the site.

Recreational activities on the site would no longer include golf and flying model airplanes. Opportunities would focus on the importance of Moccasin Bend's cultural resources.

Conclusion. Alternative 2 would have long-term beneficial effects on the visitor experience. Access, circulation, parking, and signs would help ensure safety and even distribution of visitors throughout the site. The visitor experience also would benefit from expanded interpretive programs onsite and at the visitor center/museum.

Cumulative Impacts

A cumulative impact is defined in 40 CFR 1508.7 as the effect on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of the agency (federal

or nonfederal) or person that undertakes an action. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Information, orientation, and interpretive programs and activities at Moccasin Bend and the proposed new visitor center combined with similar activities in nearby parks and other federal, state, and private areas would result in a beneficial cumulative effect on the overall visitor experience. Plans such as the extension of the riverwalk would provide park access for local residents and visitors.

Combined with various other efforts in Chattanooga in the areas of visitor activities, including orientation, interpretation, and resource preservation, enhanced Moccasin Bend visitor facilities could result in beneficial impacts on the local economy through direct employment and tourism expenditures.

COMPLIANCE WITH FEDERAL AND STATE LAWS, EXECUTIVE ORDERS, AND REGULATIONS

In implementing any of the alternatives proposed in this *Cooperative Management Plan*, the National Park Service would comply with applicable laws and executive orders, including those listed below. Informal consultation with appropriate federal, state, and local agencies was conducted during the preparation of this document. The plan and accompanying environmental assessment will be distributed to tribal, federal, state and local governments, and interested organizations and individuals for comment before a final plan is submitted to the U.S. Congress.

Natural Resources

National Environmental Policy Act. The environmental assessment was prepared in accordance with the Council on Environmental Quality regulations pertaining to the implementation of the procedural provisions of the National Environmental Policy Act (40 CFR 1500 et seq.) and in part 516 of the U.S. Department of the Interior's *Departmental Manual* (516 DM). Appropriate federal, state, and local agencies have been or will be contacted for input, review, and permitting as part of this planning and assessment effort, and in coordination with other

legislative and executive requirements. Consultation was conducted with other agencies in order to address specific issues and concerns pertaining to endangered and threatened species,

Executive Order 11988 (Floodplain Management") and Executive Order 11990 ("Protection of Wetlands"). Executive Order 11988 directs federal agencies to avoid development in floodplains whenever there is a practicable alternative. The *NPS Floodplain Management Guideline* provides requirements for implementing floodplain protection and management actions in units of the national park system. The guideline does not apply to certain park functions located near water for the enjoyment of visitors and for activities that do not involve overnight use. Implementation of either of the alternatives does not include overnight visitor facility development.

Executive Order 11990 requires federal agencies to avoid, wherever possible, impacts on wetlands. Any permitting required under section 404 of the Clean Water Act and state requirements for proposed actions would be met. If impacting wetlands is unavoidable, a statement of findings would be prepared and appropriate mitigation included. Mitigation would include restoration of local wetlands to at least a 1:1 ratio of those impacted. Wetlands to be restored would possess similar wetland functional values as those impacted. The National Park Service would coordinate with the Army Corps of Engineers to obtain necessary permits.

Endangered Species Act of 1973, as Amended. The U.S. Fish and Wildlife Service has advised the National Park Service that no federally listed or proposed endangered or threatened species live in or use the study area. Based on the information furnished by the U.S. Fish and Wildlife Service, the National Park Service has determined that the proposed alternatives would have no effect on endangered or threatened species or the critical habitat of these species with the study area. Therefore, further biological assessment or section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 USC. 1531 et seq.) is not required.

Prime and Unique Farmland. Paragraph 101(b)(4) of the National Environmental Policy Act established a federal policy to preserve

important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice. This policy is understood to include highly productive farmlands. Evaluations are required to ensure that such farmlands are not irreversibly converted to other uses unless other national interests override the importance of preservation or otherwise outweigh the environmental benefits derived from their protection.

Prime farmlands are defined as those whose value derives from their general advantage as cropland due to soil and water conditions. Unique farmlands are defined as those whose value derives from their particular advantage for growing specialty crops.

Section 404 of the Clean Water Act (33 USC 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403).

The U.S. Army Corps of Engineers has regulated activities in the nation's waters since 1890. Until the 1960s, the primary purpose of the regulatory program was to protect navigation. Since then, as a result of laws and court decisions, the program has been broadened to encompass the full public interest for both the protection and utilization of water resources.

Regulatory authority and responsibilities of the Corps of Engineers includes section 404 of the Clean Water Act. This includes regulation of the discharge of dredged material into waters of the United States, including both navigable waters and adjacent wetlands. In addition, section 10 of the Rivers and Harbors Act of 1899 is regulated by the Corps of Engineers for activities in or affecting navigable waters.

Since certain proposed actions would impact waters that are considered waters of the United States, the plan is subject to U.S. Army Corps of Engineers review under the 404 regulatory program.

National Pollution Discharge Elimination System. Under the "Stormwater Application Rule" of November 16, 1991, an NPDES permit is necessary for areas of construction activity involving 5 acres or more. Public and private facilities that discharge stormwater via one or more point sources into the waters of the United

States directly or through a separate storm sewer system are required to make application to the state or the Environmental Protection Agency.

Section 118 of the Clean Air Act As Amended (42 USC 7401 Et Seq.).

Compliance with section 118 of this act is not applicable since no alternative is anticipated to result in an appreciable change from existing conditions.

Cultural Resources

Potential impacts on cultural resources must be addressed under the provisions for assessing effects outlined in 36 CFR 800 regulations issued by the Advisory Council on Historic Preservation implementing section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470 et seq.). Under the "Criteria of Effect" (36 CFR 800.9(a), federal undertakings are considered to have an effect when they alter the character, integrity, or use of a cultural resource, or the qualities that qualify a property for listing on the National Register of Historic Places.

The National Park Service will consult with the Tennessee State Historic Preservation Office and the Advisory Council on Historic Preservation to ensure that NPS operations, management, and administration provide for the site's cultural resources in accordance with the intent of NPS policies and with sections 106, 110, and 111 of the National Historic Preservation Act, as stated in the 1990 programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. Under stipulation D of the programmatic agreement, all undertakings that are not considered programmatic exclusions, or are not included in plans reviewed under the former programmatic memoranda of agreement, would be reviewed in accordance with 36 CFR 800 and *NPS-28: Cultural Resource Management Guideline*.

Before any ground-disturbing action by the National Park Service, a professional archeologist will determine the need for further archeological inventory or testing evaluation. Any such studies will be carried out before or in conjunction with construction and would meet the requirements of the State Historic Preservation Office and the National Park Service. If archeological resources

are uncovered during any ground breaking activities, work will be stopped until an evaluation can be made regarding eligibility to the National Register of Historic Places and section 106 procedures are completed.

The Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601; 104 Stat. 3049) assigns ownership or control of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are excavated or discovered on federal lands or tribal lands after passage of the act to lineal descendants or affiliated Indian tribes or Native Hawaiian organizations; establishes criminal penalties for trafficking in human remains or cultural objects; and requires federal agencies and museums that receive federal funding to inventory Native American human remains and associated funerary objects in their possession or control and identify their cultural and geographical affiliations within five years, and prepare summaries of information about Native American unassociated funerary objects, sacred objects, or objects of cultural patrimony. This is to provide for repatriation of such items when lineal descendants, Indian tribes, or Native Hawaiian organizations request it.

Accessibility of Special Populations

The site would be accessible to special populations in accordance with the Architectural Barriers Act of 1968 (42 USC 4151 et seq.), the Rehabilitation Act of 1973 (29 USC 701 et seq.), and the Americans With Disabilities Act of 1990.

Executive Order 12898 (“Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”)

For the purpose of fulfilling EO 12898, in context of the National Environmental Protection Act, the alternatives addressed in this plan were assessed during the planing process. It was determined that none of these actions by themselves would result in significant direct or indirect negative or adverse effects on any minority or low-income population or community.

The following facts contributed to this conclusion:

- None of the alternatives would result in any identifiable adverse human health effects and thus there would be no direct or indirect negative or adverse effects on any minority or low-income population or community.
- The impacts on the natural and physical environment that would occur due to implementation of one of the alternatives would not appreciably and adversely affect any minority or low-income population or community.

Permits

The state of Tennessee, Hamilton County, and the city of Chattanooga have permit requirements for design and construction of roads, facilities and other improvements. All activities would be conducted in compliance with all applicable local, state, and federal regulations. In addition, the National Park Service would pursue consultation with the appropriate agencies for various permitting requirements.